

Please replace the following paragraphs of the specification Applicant includes herewith an Attachment for Specification Amendments showing a marked up version of each replacement paragraph.

A) [0002] Scroll elements have long been produced in iron base and other alloys using various forms of sand casting. Because, for most applications, these castings must subsequently be extensively machined to very precise tolerances and must be free of injurious defects, it is desirable to minimize casting tolerances and sand related quality problems such as scabs, inclusions and blow-holes. These considerations have tended to favor the application of premium casting methods such as shell molding and lost foam casting. Less costly casting methods, such as various green sand techniques have often been used, but typically with only modest success owing to considerations related to tolerances and quality. For green sand casting, tolerances for the most important casting features, such as the involute of a scroll component, can be improved through the use of shell, cold-box or similar cores and through careful attention to the design of core prints. Additionally, by locating the prints in the same side of the mold as the green sand cast features, tolerances can be further improved. Unfortunately, some sand related quality problems tend to remain. In the case of ordinary low cost horizontally parted molds, well known principles of design of the gating system (runners, gates, sprue bases, chokes, tails, etc.), can address the root cause of many of these quality problems with some success. In the case of very low cost vertically parted molds, as produced on a Disamatic mold making machine, even the most carefully designed conventional gating systems have been less successful in avoiding the generation of loose sand and sand related quality defects.